

10th Class 2021

Math (Science)	Group-I	PAPER-II
Time: 20 Minutes	(Objective Type)	Max. Marks: 15

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- Two linear factors of $x^2 - 15x + 56$ are:

- (a) $(x - 7) & (x + 8)$ (b) $(x + 7) & (x - 8)$
(c) $(x - 7) & (x - 8)$ ✓ (d) $(x + 7) & (x + 8)$

2- Product of cube roots of unity is:

- (a) 0 (b) -1 ✓
(c) -1 (d) 3

3- If α, β are the roots of $x^2 - x - 1 = 0$, then product of the roots 2α and 2β is:

- (a) -2 ✓ (b) 2
(c) 4 (d) -4

4- In a proportion $a : b :: c : d$, b and c are called:

- (a) Means ✓ (b) Extremes
(c) Third proportional (d) Fourth proportional

5- If $y^2 \propto \frac{1}{x^3}$, then:

- (a) $y^2 = \frac{k}{x^3}$ ✓ (b) $y^2 = \frac{1}{x^3}$
(c) $y^2 = x^3$ (d) $y^2 = k x^3$

6- Two square roots of unity are:

- (a) $1, -1$ ✓ (b) $1, \omega$
(c) $1, -\omega$ (d) ω, ω^2

7- If $A \subseteq B$, then $A \cup B$ is equal to:

- (a) A ✓ (b) B
(c) ϕ (d) $A - B$

- 8- The domain of $R = \{(0, 2), (2, 3), (3, 3), (3, 4)\}$ is:
(a) $\{0, 3, 4\}$ (b) $\{2, 3, 4\}$
(c) $\{0, 2, 4\}$ (d) $\{0, 2, 3\}$ ✓
- 9- A histogram is a set of adjacent:
(a) Squares (b) Rectangles ✓
(c) Circles (d) Triangles
- 10- The spread or scatterness of observations in a data set is called:
(a) Average (b) Central tendency
(c) Dispersion ✓ (d) Mean
- 11- $\frac{3\pi}{4}$ radians = :
(a) 115° (b) 30°
(c) 150° (d) 135° ✓
- 12- Line segment joining any point of the circle to the centre is called:
(a) Radial segment ✓ (b) Diameter
(c) Circumference (d) Perimeter
- 13- A circle has only one _____.
(a) Secant (b) Chord
(c) Diameter (d) Centre ✓
- 14- The arcs opposite to incongruent central angles of a circle are always:
(a) Congruent (b) Incongruent ✓
(c) Parallel (d) Perpendicular
- 15- The portion of a circle between two radii and an arc is called:
(a) Chord (b) Segment
(c) Sector ✓ (d) Diameter